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BUREAU OF PLANT INDUSTRY

PLANT IMMIGRANTS.

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Foreign Seed and Plant Introduction.

EXPLANATORY NOTE.

This multigraphed circular is made up of descriptive notes furnished mainly by Agricultural Explorers and Foreign Correspondents relative to the more important introduced plants which have recently arrived at the Office of Foreign Seed and Plant Introduction of the Bureau of Plant Industry of the Department of Agriculture, together with accounts of the behavior in America of previous introductions. Descriptions appearing here are revised and published later in the INVENTORY OF PLANTS IMPORTED.

Applications for material listed in these pages may be made at any time to this Office. As they are received they are placed on file, and when the material is ready for the use of experimenters it is sent to those on the list of applicants who can show that they are prepared to care for it as well as to others selected because of their special fitness to experiment with the particular plants imported. Do not wait for the annual catalogue entitled NEW PLANT INTRODUCTIONS which will be sent you in the autumn and in which will be listed all plants available at that time. Regular requests checked off on the check list sent out with the catalogue are not kept over from year to year. If you are especially interested in some particular plant in the catalogue write and explain in detail your fitness to handle it.

One of the main objects of the Office of Foreign Seed and Plant Introduction is to secure material for plant experimenters, and it will undertake as far as possible to fill any specific requests for foreign seeds or plants from plant breeders and others interested.

David Fairchild,

Agricultural Explorer in Charge.

March 25, 1919.

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Aphloia theaeformis (Flaccurtiaceae), 46389. From Tamatave, Madagascar. Presented by the Envoi de la Station Experimentale d'Agriculture du Government Ivoloina. A low tree found on the slopes of the mountains in Madagascar. The small white berries, which literally cover the tree, are edible and very wholesome although slightly bitter. The leaves are said to possess medicinal virtues. (Adapted from Heckel, Plantes Utiles de Madagascar, p. 256.)

Azadirachta indica (Meliaceae), 46573. **Neem tree.** From India. Seeds presented by Mr. G. T. Lane, Curator, Royal Botanic Garden, Sibpur, near Calcutta. A large tree, sometimes 50 feet tall, native of India. The pinnate leaves are made up of 9 to 15 ovate, serrate leaflets. The white, fragrant flowers hang in graceful panicles and are followed by clusters of ovoid, dark purple drupes the size of an olive. The wood resembles mahogany and takes a beautiful polish. It is used in making furniture, carts, ships, agricultural implements, and Hindu idols. The sap is used in the spring in making a cooling drink. A gum, which exudes from the bark, is used as a stimulant. Margosa oil, extracted from the pulp of the fruits by boiling or by pressure, is an acrid, bitter oil used in medicine and in dyeing. The seeds are employed in killing insects. (Adapted from Brandis, Forest Flora of India, p. 67.)

Belou marmelos (Rutaceae), 46477. **Bael fruit.** From Shahjahanpur, India. Presented by Mr. N. L. Rockey, District Superintendent, Methodist Episcopal Church. "The **bael fruit** grows plentifully in India. It is prized as a fruit from which to make sherbet. Some of the fruits are very fine; others are useless. It has the flavor of concentrated peaches. The fruit is extremely valuable in the treatment of dysentery, as it is a mild astringent. At the same time it is a food." (Rockey.)

Brabejum stellatifolium (Proteaceae), 46474. From Pretoria, South Africa. Presented by Mr. I. B. Pole Evans, Chief, Division of Botany, Department of Agriculture. A shrub or small tree 8 to 10 feet high, found in the western part of South Africa. The purplish twigs bear lanceolate, serrate, coriaceous leaves in whorls of six. The white, sweet-scented flowers are borne in dense, axillary racemes, 3 to 6 inches long, and are followed by ovoid, densely velvety fruits, 1 to 2 inches long, each containing a single seed. The seed may be

eaten after prolonged soaking in water. The red, reticulated wood is used for joiners' and turners' ornamental work. (Adapted from Thiselton-Dyer, Flora Capensis, vol. 5, p. 504.)

Cajan indicum (Fabaceae), 46480. **Pigeon-pea.** From Zacuapam, Mexico. Presented by Dr. C. A. Purpus. **Frijolito garbanzo.** "The pigeon-pea, or **guandu,** supposed to be a native of India, is cultivated widely for food in the tropics and subtropics. It is perennial in frostless regions, but is usually cultivated as an annual. The plant develops into a large, semi-woody bush reaching a height of from 5 to 10 feet. Although the skin of the pigeon-pea is a little tough the flavor of the peas is good. In India this vegetable is commonly called **dhall** or **dahl.**" (Young.)

Mr. H. V. Krishnayye, Officiating Director of the Mysore Department of Agriculture, states that in preparing **dhall** for the market it is soaked for twenty-four hours in puddled red earth and then dried. In the removal of the dried earth the skin, or husk, of the seed also comes off. The product is then ready for market. This letter contains the following further statement: "The pulse as it is sold in the market is dehusked and split and is ready for cooking without further treatment. **Dhall** enters into the composition of many Indian dishes, where it supplies the nitrogenous constituents in a vegetarian ration, but these will probably not be relished by non-Indian palates. However, I think it is safe to say that **dhall** could be substituted for lentils in all your dishes with satisfactory results."

"Krauss, of Hawaii, reports that an excellent forage is secured there from pigeon-peas by lopping off the tops and drying them with the peas attached and then reducing these tops to meal. He asserts that this rivals alfalfa meal in food value." (Fairchild.)

Ceiba pentandra (Bombacaceae), 46522. **Kapok.** From Mexico. Presented by Mr. John R. Silliman, American Consul, Guadalajara. "The **kapok** tree, native in the American tropics, is widely distributed in the tropics of both hemispheres. It attains a height of from 75 to 100 feet with wide-spreading horizontal branches, making an attractive ornamental or shade tree. It is often, planted along the borders of fields for fence posts. It begins to bear seed pods with down, when about five years old and the yield of pods increases with the age of the tree. Well-developed trees under favorable

conditions, yield about 7,000 pounds per acre. **Kapok** cannot be spun but it is an excellent material for pillows, mattresses, life preservers, etc., and its use is rapidly increasing." (L. H. Dewey.)

Crataegus mexicana (Malaceae), 46481. **Hawthorn.** From Zacuapam, Mexico. Presented by Dr. C. A. Purpus. **Tejoiote.** The tree is bushy, 8 to 10 feet in height with glabrous, olive-colored branches. The leaves are oblong, attenuated at the base, and 2 to 3 inches in length. The abundant flowers are borne in terminal corymbs. The fruit is larger than is usual among the hawthorns. The color when ripe is pale yellow, dotted with brown. It is a native of the table-lands of Mexico, and has been found quite hardy in England. (Adapted from The British Flower Garden, 1835, p. 300.)

Dacrydium cupressinum (Pinaceae), 46575. **Rimu.** From Auckland, New Zealand. Presented by Mr. H. R. Wright. "Prettiest of all our native trees; a real treasure." (Wright.)

"This pine is one of the most beautiful objects in the New Zealand bush. Its pale green, drooping branches differ from those of any other forest tree. The leaves are only small prickles, running up a long stem, from which branch out other small stems whose united weight causes the main stem to hang like the branches of the weeping willow. The whole tree, when young, has the appearance of a Lycopodium. The fruit is tiny, but beautiful, the nut being blue-black and the cup red. The timber is of a red or yellow color and beautifully marked. It is used to great advantage in dadoes, panels, and for ceilings. The **Taranaki rimu** is especially straight in the grain and very resinous. It is much used for bridge-building in that district." (Laing and Blackwell, Plants of New Zealand, p. 74.)

Dammara australis (Pinaceae), 46387. **Kauri pine.** From New Zealand. Presented by Mr. J.W. Poynton, Palmerston North, New Zealand. This magnificent tree, native of New Zealand, sometimes measures 180 feet in height and 17 feet in diameter, the estimated age of such a tree being 700 to 800 years. It furnishes an excellent, straight-grained, remarkably durable timber which is much used in boat and bridge-building, for furniture and wagon-making. This tree also yields the **kauri** resin from which an almost colorless varnish is made. (Adapted from Mueller, Select Extra-Tropical Plants, ed. 9, p. 161.)

Ipomoea sp. (Convolvulaceae), 46460. From Burringbar, New South Wales. Presented by Mr. B. Harrison. "Native Ipomoea with large, purple flowers and handsome, laciniated foliage. Would make a good ornamental. A perennial vine with tuberous root." (Harrison.)

Macadamia youngiana (Proteaceae), 46463. **Thin-shelled Queensland nut.** From Burringbar, New South Wales. Presented by Mr. B. Harrison. "Very rare here." (Harrison.)

A shrub 8 to 10 feet high with oblong leaves in whorls of three or four and with nuts resembling those of *M. ternifolia,* but with thinner shells. (Adapted from Bentham, Flora Australiensis, vol. 5, p. 406.)

Myrica rubra (Myricaceae), 46571. From Canton, China. Seeds presented by Mr. G. Weidman Groff, Canton Christian College. "**Shui yeung mui.** A very interesting, plumlike fruit, common on the market of Canton in the month of May. This fruit makes a most attractive appearance and it is always marketed with the dark green leaves attached to the fruit. In general appearance it is not unlike a strawberry but more rounded. It has a roughened skin and is quite acid in taste. There is but one seed, which is difficult to detach from the flesh. July 18, 1918." (Groff.)

Nymphaea gigantea (Nymphaeaceae), 46464. **Water-lily.** From Burringbar, New South Wales. Presented by Mr. B. Harrison. "The large beautiful blue water-lily of the northern rivers of New South Wales." (Harrison.)

Pandorea australis (Bignoniaceae), 46384. From Sawtelle, California. Presented by Mr. P. D. Barnhart. "The most wonderful of all climbing plants grown on this coast. It is a rampant grower with dark, shining green foliage. The flowers are a light cream spotted with chocolate. The whole show is over in about two weeks, but during this time the flowers are profusely abundant." (Barnhart.)

Persea americana (Lauraceae), 46574. **Avocado.** From Mexico. Presented by Mrs. Zelia Nuttall, Coyoacan. "When Mr. Popenoe was here recently, he asked me what variety of **aguacate** I regarded as the best I had ever tasted, either here or in any other country. I told him that I considered a certain kind grown on my own place, Casa Alvarado, the finest in flavor and creaminess; besides, the skin was so thin that it could be

peeled off as easily as that of a ripe peach. He tried the first ripe ones of this year's crop and was delighted with them; he asked me to send him large quantities of seeds." (Nuttall.)

Phormium tenax (Liliaceae), 46388. **New Zealand flax.** From New Zealand. Seed presented by Mr. J. W. Poynton, Palmerston North, New Zealand. "The yield is about one ton of fiber from eight tons of green leaves. The nonfibrous part of the leaves, stripped from the fiber, has a lot of protein material in it and some sugar and starch. Cattle eat the cut-up leaves greedily. If the waste were dried it would probably make a good cattle feed. When decayed, it makes an excellent fertilizer. Analyses have shown a high percentage of potassium salts in the ash." (Poynton.)

Prunus mume (Amygdalaceae), 46572. **Japanese apricot.** From Canton, China. Seeds presented by Mr. G. Weidman Groff, Canton Christian College. "These fruits, known on the Chinese (Cantonese) markets as **Hang mui**, are quite common in Canton in the month of May. The fruit is somewhat like an apricot. It is said that there are several different types. A bitter principle exists in these particular fruits, but they make a very fine jelly. This number has possibilities as a cultivated fruit or as a stock." (Groff.)

"Although every American artist who visits Japan in the early spring comes away with the keenest appreciation of the remarkable beauty and picturesque character of the so-called 'flowering plums' of Japan, few of these artists appear to know anything about the fruit which is borne by these beautiful flowering trees. These fruits, which are properly classed by botanists with the apricots instead of the plums, constitute a most unique food of the Japanese. Though sometimes eaten fresh, much in the same way as we eat our native American plums, they are usually pickled in brine and colored with the colored leaves of the perilla plant and packed in boxes or other receptacles for household use. Great quantities of these pickled mumes are consumed in Japan. Their use is so universal that they formed an important part of the army ration in the Russo-Japanese war and it is said that they were often depended on to quench the thirst of the soldiers when on long marches. One's first impression of these Japanese pickles may be properly compared with one's first impression of the Spanish pickled green olive, which

has now become so popular. Eaten with meats, they furnish an entirely new and appetizing flavor; one which, perhaps, is destined to become popular in America, — certainly one which deserves our investigation. The trees are very hardy and there are a great many varieties; when in flower they are very beautiful. Our horticulturists should study them." (Fairchild.)

Quercus sp. (Fagaceae), 46383. **Oak.** From Guatemala. Presented by Mr. E. Reeves, Finca "El Tambor," San Felipe, Retalhuleu, at the request of Dr. Wm. Trelease, of the University of Illinois. "Fruits of a large-fruited oak that grows a few miles from here." (Reeves.)

"I am glad that Mr. Reeves got to you viable seeds of his fine oak — which I thought you would like. It is between *Q. corrugata* and *Q. cyclobalanoides* in characters but very distinct from both." (Trelease.)

Swainsona sp. (Fabaceae), 46457. From Australia. Presented by Mr. J. A. Hamilton, Tolga, Queensland. "Seeds of a perennial vetch. The plant seems very drought-resistant, as it is green all the time. It holds its own among the native grasses and is green when they are dried up, so it must root very deeply. This ought to prove a very valuable fodder crop in semi-tropical areas, especially in drier parts. It grows in very porous, well-drained soil." (Hamilton.)

United States Department of Agriculture.
Bureau of Plant Industry.
Office of Foreign Seed and Plant Introduction.
Washington, D. C.

Washington Scientific Staff.

David Fairchild, Agricultural Explorer in Charge.
P. H. Dorsett, Plant Introducer, in Charge of Plant Introduction Field Stations.
B. T. Galloway, Plant Pathologist.
Peter Bisset, Plant Introducer, in Charge of Foreign Plant Distribution.
J. B. Norton, and Wilson Popenoe, Agricultural Explorers.
H. C. Skeels, G. P. Van Eseltine, and R. A. Young, Botanical Assistants.
Miss Bessie Broadbent, E. L. Crandall, L. G. Hoover, J. H. Johnson, R. N. Jones, P. G. Russell, and C. C. Thomas, Assistants.
Edward Goucher, Plant Propagator.

Field Stations Scientific Staff.

R. L. Beagles, Superintendent in Charge, Plant Introduction Field Station, Chico, Cal.
E. O. Orpet, Assistant in Plant Introduction.
J. E. Morrow, Superintendent in Charge, (Yarrow) Plant Introduction Field Station, Rockville, Md.
Edward Simmonds, Superintendent in Charge, Plant Introduction Field Station, Miami, Fla.
D. A. Bisset, Assistant in Charge, Plant Introduction Field Station, Brooksville, Fla.
Henry E. Juenemann, Superintendent in Charge, Plant Introduction Field Station, Bellingham, Wash.
E. J. Rankin, Assistant in Charge, Plant Introduction Field Station, Savannah, Georgia.

Collaborators.

Mr. Aaron Aaronsohn, Haifa, Palestine.
Mr. Thomas W. Brown, Cairo, Egypt.
Mr. H. M. Curran, Laurel, Md.
Mr. M. J. Dorsey, University Farm, St. Paul, Minn.
Mr. Robt. H. Forbes, Societe Sultanienne D'Agriculture, Cairo, Egypt.
Mr. A. C. Hartless, Saharanpur, India.
Mr. Barbour Lathrop, Chicago, Ill.
Mr. H. Nehrling, Gotha, Fla.
Mr. Charles Simpson, Littleriver, Fla.
Mr. H. P. Stuckey, Experiment, Ga.
Dr. L. Trabut, Director, Service Botanique, Algiers, Algeria.
Mr. H. N. Whitford, School of Forestry, New Haven, Conn.
Mr. E. H. Wilson, Arnold Arboretum, Jamaica Plain, Mass.
Dr. F. A. Woods, Washington, D. C.